Course Syllabus

Spring Semester 2026

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Daily		8:00-8:50 am
TTh		9:00-9:50 pm
T		10:00-10:50 pm
MWF		1:00-1:50 pm
Daily	(appt. only)	12:00-12:50pm

Course Information

An introduction to fundamental concepts needed to support the development of mobile and distributed applications. Topics include mobile application frameworks, application lifecycle issues, mobile user experience design, and client-server programming. *Prerequisite: CpS 209.* 3 credits.

Overview

This course tackles the technologies used and issues involved in the development of mobile applications. The course covers technologies, tools, and techniques used to build applications that are secure, efficient, maintainable, using the Flutter platform.

This is an advanced class in our computer science program. Strong programming proficiency is expected. Expect to spend several hours a week writing code. The instructor will present key concepts and coding techniques in class, but students are expected to do their own research and reading in order to successfully complete assignments.

Computer Requirements

See the Windows or MacOS system requirements for creating Flutter apps.

Course Resources

- Dart documentation

- [Flutter documentation](#)

- Textbook (optional): *[Ultimate Flutter for Cross-Platform App Development : Build Seamless Cross-Platform Flutter UIs with Dart, Dynamic Widgets, Unified Codebases, and Expert Testing Techniques (English Edition)](#)*, Adefioye, Temidayo, Orange Education PVT Ltd, 2024. *ProQuest Ebook Central*.

Grading

Assessments			Scale	
Qty	Item	Points	Total	
			A	90-100%
6	Programs	100	600	
1-3	Quizzes	20	20-60	B	80-89%
4	Written Tests	100	400	C	70-79%
2	[Professional Development](#)	30	30	D	60-69%
Total Points:		1050+			
			F	<60%

Course Policies

In this course, topics build on the previous topic. Thus, if you fall behind, you will struggle with new content. For this reason, I do not accept late work. Work is due at the deadline. **Late work receives a 0**. Extensions may be purchased with **tokens**.

[Professionalism](#)

[Emergencies](#)

[Handbook Policies](#)

[Attendance Policy](#)

[Accommodations for Students with Disabilities](#)

[Academic Honesty and Integrity Policy](#)

Generative AI Exceptions

Using generative AI for error-related information or coding library information is permissible if 1) you do not feed in course or textbook content (notes, instructions, solutions, etc.), 2) you do not copy large blocks of non-UI code (6+ lines of code), and 3) you document which AI tool was used, the prompts used, and the output. (Using AI to generate interfaces that do not require logic is permitted but risky.)

Testing Environment

Course Materials Use

Curriculum Information

Context

This course supports the following objectives of the Computer Science program:
CS 1. Design and implement solutions to practical problems
CS 2. Use appropriate technology as a tool to solve problems in various domains

Objective Content Assessment	Content	Assessment
Construct small mobile and distributed applications	Lectures, Flutter documentation	Programs 2-6, Test 2 and 3, Final Exam
Use asynchronous programming techniques to maintain app responsiveness	Lectures, Flutter documentation	Programs 4-6
Create user interfaces based on accepted mobile user	Lectures, Flutter documentation	Programs 2-4, 6
Use appropriate back-end technology to store and retrieve data in the cloud	Lectures, Django/Docker documentation	Program 5

Tentative **Schedule**

Week	Topic	Due

Week	Topics	Assignments
Week 1 (½) 1/14-1/17	Introduction, Mobile app dev, Installation Dart (Chapter 2)	
Week 2 (1½) 1/21-1/24	*MLKj Day, no Monday class* Dart Testing	
Week 3 (2½) 1/26-1/31	Testing, Mocking, Flutter setup and use Flutter Widgets Test 1 Topics, Program 2 Topics	**Quiz 1 (Wed)** **Program 1 (Sat)**
Week 4 (3½) 2/2-2/7	Flutter Widgets Test 1 GridView, Layouts	**Program 2a:** **Configuration (Sat)**
Week 5 (4½) 2/9-2/14	Server connection Rest API Flutter connection to REST API	
Week 6 (5) 2/16-2/21	Secure communication, Test 2 topics, Database setup *Bible Conference*	
Week 7 (6) 2/23-2/28	Data persistence, Django testing, triggering Django tasks Test 2 Django user pages and templates	Program 2: Flutter (Mon)
Week 8 (7) 3/2-3/7	multiple screens, camera Arts & Culture App	Program 3: Django (Sat)

Week 9 (8) 3/9-3/14	Breaking up project Account Deletion	
Week 10 (9) 3/16-3/21	Deep links database, security	[Program 4: Flutter REST API](#)
Week 11 (9) 3/23-3/28	*Spring Break, no classes*	
Week 12 (10) 3/30-4/4	Local data persistence Workday Special Topics	[Paper: Security Report](#)
Week 13 (11) 4/6-4/11	Test 3 topics Animations	Program 5: Sprint 1
Week 14 (12) 4/13-4/18	Test 3 *University Service Day, no Wednesday class* Special Topics	
Week 15 (13) 4/20-4/25	Special Topics Monetization	**Program 6: Sprint 2 and Integration**
Week 16 (14) 4/27-5/2	Deploying Final Exam Review Demos	
Week 17 (14⅓)	**Final Exam** Wed., May 6 at 12:30-1:40 pm	

Course Summary:

Course Summary

Date	Details	Due
Sat Jan 31, 2026	Assignment [Program1: Word Wit in Dart](#)	due by 11:59pm
Wed Feb 4, 2026	Assignment [Test 1](#)	due by 8:50am
Sat Feb 7, 2026	Assignment [Program 2a: Configuration](#)	due by 11:59pm
Mon Feb 23, 2026	Assignment [Program 2: Word Wit in Flutter](#)	due by 11:59pm
Fri Feb 27, 2026	Assignment [Test 2](#)	due by 8:50am
Sat Mar 7, 2026	Assignment [Program 3: Django](#)	due by 11:59pm
Fri Mar 13, 2026	Assignment [Project Division](#)	due by 8:05am
Mon Mar 16, 2026	Assignment [Division Choice](#)	due by 9am
Thu Mar 19, 2026	Assignment [Program 4: Flutter Connection](#)	due by 11:59pm
Sat Apr 4, 2026	Assignment [Security Report](#)	due by 11:59pm
Sat Apr 11, 2026	Assignment [Program 5: Arts & Culture App (Part 1)](#)	due by 11:59pm
Mon Apr 13, 2026	Assignment [Test 3](#)	due by 8:50am
Sat Apr 25, 2026	Assignment [Program 6: Arts & Culture App (completion and integration)](#)	due by 11:59pm

Course Summary

Date	Details	Due
Sat May 2, 2026	Assignment [Professional Development](#)	due by 11:59pm
	Assignment [Program 7: MVP](#)	due by 11:59pm
Thu May 7, 2026	Assignment [Architecture Patterns](#)	due by 9:10am
	Assignment [Deployment](#)	due by 9:10am
	Assignment [Late Tokens](#)	

January 2026

Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28 December 2025 28 Previous month	29 December 2025 29 Previous month	30 December 2025 30 Previous month	31 December 2025 31 Previous month	1 January 2026 1	2 January 2026 2	3 January 2026 3
4 January 2026 4	5 January 2026 5	6 January 2026 6	7 January 2026 7	8 January 2026 8	9 January 2026 9	10 January 2026 10
11 January 2026 11	12 January 2026 12	13 January 2026 13	14 January 2026 14	15 January 2026 15	16 January 2026 16	17 January 2026 17
18 January 2026 18	19 January 2026 19	20 January 2026 20	21 January 2026 21	22 January 2026 22	23 January 2026 23	24 January 2026 24

Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25 January 2026 25	26 January 2026 26	27 January 2026 27	28 January 2026 28	29 January 2026 29 Today	30 January 2026 30	31 January 2026 31 Click to view event details
1 February 2026 1 Next month	2 February 2026 2 Next month	3 February 2026 3 Next month	4 February 2026 4 Next month Click to view event details	5 February 2026 5 Next month	6 February 2026 6 Next month	7 February 2026 7 Next month Click to view event details

Course assignments are not weighted.